AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-2 (Cancelled).

Claim 3 (Currently Amended): The process as claimed in ~~claim 1~~ claim 10, wherein the ladle is a 140 ton ladle.

Claims 4-5 (Cancelled).

Claim 6 (Currently Amended): The process as claimed in ~~claim 1~~ claim 10, wherein said additive is a ferro-alloy material.

Claim 7 (Currently Amended): The process as claimed in ~~claim 1~~ claim 10, wherein said additive is a calcium bearing material.

Claim 8 (Previously Presented): The process as claimed in claim 7, wherein said calcium bearing material comprises calcium-silicide.

Claim 9 (Previously Presented): The process as claimed in claim 7, wherein said calcium bearing material comprises calcium iron.

Claim 10 (New): A cored wire injection process for introducing fluxes and alloying additives in a liquid steel bath after adjusting a bath temperature and a chemistry of liquid steel in a secondary treatment unit, a ladle of said treatment unit having a bath depth, said injection process comprising the steps of:

determining dimensions of a prefabricated cored wire containing the fluxes and alloying additives based upon a grade of the liquid steel in the liquid steel bath, the bath temperature, a size of the ladle, the bath depth of the ladle, and properties of a cored wire material, wherein the dimensions of the prefabricated cored wire are determined for maximum utilization of said additives;

determining a speed of injection of the prefabricated cored wire into the ladle based upon the grade of the liquid steel in the liquid steel bath, the bath temperature, the size of the ladle, the bath depth of the ladle, and the properties of the cored wire material;

providing a prefabricated cored wire containing the fluxes and alloying additives and having the determined dimensions;

injecting the prefabricated cored wire into the ladle at the determined speed of injection; and

releasing said additives from the prefabricated cored wire very close to a bottom of the ladle at a depth approximately equal to the bath depth.

Claim 11 (New): The process as claimed in claim 10, wherein the bath temperature is approximately 1630°C, the bath depth is 3 m, the dimensions of the prefabricated cored wire are 18 mm in diameter and 0.8 mm in sheath thickness, and the injection speed is approximately 110 m/min.